

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of the Claims

Claim 1 (Currently Amended) A cryogenic receiver front-end comprising

a heat sink, the heat sink comprising a mounting surface and a plurality of fins;

a cryocooler mounted to the mounting surface of the heat sink;

a heat rejector attached to the cryocooler, the heat rejector including a plurality of c-shaped recesses therein, the c-shaped recesses adapted to provide contact with heat pipes, the heat rejector surrounding the cryocooler and being coupled to the cryocooler adjacent the region generating compression heat;

a plurality of heat pipes, each heat pipe having first and second ends, the first ends of the plurality of heat pipes disposed in respective c-shaped recesses of the heat rejector, the c-shaped recess substantially surrounding the heat rejector, the second ends of the plurality of heat pipes being thermally coupled to the heat sink, the heat pipes including a bend between the first and second ends, the heat pipes at the second end being angled outward from the heat rejector, the plurality of heat pipes having a working fluid disposed therein; and

an enclosure unit mounted to the heat sink.

Claim 2 (Original) The thermally conductive interface of claim 1, wherein the heat rejector is made of a metal.

Claim 3 (Original) The cryogenic receiver front-end of claim 2, the heat rejector being formed from annealed copper.

Claim 4 (Original) The cryogenic receiver front-end of claim 1, the plurality of heat pipes being formed from OFHC copper.

Claim 5 (Cancelled)

Claim 6 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is disposed inside a structure.

Claim 7 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is disposed in an outside environment.

Claim 8 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is disposed in or adjacent to a base station.

Claim 9 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is mounted to a pad.

Claim 10 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is mounted to a wall.

Claim 11 (Original) The cryogenic receiver front-end of claim 1, wherein the cryogenic receiver front-end is mounted to a pole.

Claim 12 (Original) The cryogenic receiver front-end of claim 1, wherein the working fluid is selected from the group consisting of methanol, ammonia, water, nitrogen, neon, and ethane.

Claims 13-24 (Cancelled)

Claim 25 (Previously Presented) The cryogenic receiver front-end of claim 1, further including a high temperature superconductor filter system.

Claim 26 (Previously Presented) The cryogenic receiver front-end of claim 1, wherein the cryocooler is a linear cryocooler.

Claim 27 (Previously Presented) The cryogenic receiver front-end of claim 26, wherein the linear cryocooler is a stirling cycle cooler.

Claim 28 (Previously Presented) The cryogenic receiver front-end of claim 1, wherein the heat pipes include an elbow shaped bend.

Claim 29 (Previously Presented) The cryogenic receiver front-end of claim 28, wherein the bend is an angle greater than 90°.

Claim 30 (Previously Presented) The cryogenic receiver front-end of claim 28, wherein the heat pipe is oriented for gravity reflow of coolant in the heat pipe.

Claim 31 (Previously Presented) The cryogenic receiver front-end of claim 1, wherein
the heat fins are oriented in a vertical direction.